

Application Serial No.: 10/511,287
Amdt. dated December 29, 2006
Reply to Final Office Action of August 4, 2006

REMARKS/ARGUMENTS

The Final Office Action dated August 4, 2006 and the references cited therein have been carefully considered. In response to the Office Action, Applicant has amended Claims 2, 10, 12, 18, 19 and 21, added new Claims 22-24 and cancelled a corresponding number of pending Claims (i.e., Claims 7, 8 and 16) which, when considered with the remarks set forth below, are deemed to place the case with Claims 1-3, 5-6, 9-15 and 17-24 in condition for allowance.

In the Office Action, the Examiner has maintained his rejection of the claims based on prior art. Specifically, the Examiner has rejected Claims 1-3, 6-13 and 16-21 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,862,502 to Young in view of U.S. Patent No. 3,297,980 to Haslett and has rejected Claims 5, 14 and 15 under 35 U.S.C. §103(a) as being unpatentable over the Young and Haslett patents in view of U.S. Patent No. 4,563,830 to Cain.

The Examiner states that the Young patent discloses a method for collecting animals on a water bottom wherein a collecting device (13, 16) is moved over the bottom and has at least one tine (25) provided with fluid outlet means and an operating means (15) for moving the tine. In this regard, the Examiner has taken the position that the towline (15) described in the Young patent is considered an operating means for raising and lowering the entire collecting device (16) into and out of the sea bottom.

The Examiner notes that the Young patent fails to disclose a detection means to activate movement of the tine but cites the Haslett patent as disclosing a detection means (14) provided on the collection device (10) to detect the presence of animals. The Examiner concludes that the detection means disclosed in the Haslett patent can send a signal to an operator of the fishing vessel to enable the operator to raise or lower the collecting device (16) disclosed in the Young patent to collect animals from the bottom of the sea.

Independent Claims 1, 9, 17 and 20

Applicants respectfully traverse the rejection of independent Claims 1, 9, 17 and 20. Specifically, it is respectfully submitted that none of the prior art references, taken alone or combined, discloses activating an animal collector in response to detecting an animal living on or in a water bottom.

Instead, the Young patent only discloses a "conventional" harvesting means provided with water injection means, which are sub-seabed during use, for fluidizing part of the seabed such that animals living in the seabed can be harvested. A sled is provided and the nozzles extend a distance below the sled, which defines the depth of nozzle insertion below the seabed. During use, the device rests on the seabed and is towed forward, such that the nozzles are forced into the ground where they remain during use until the entire device is hoisted back to the water surface. No indication whatsoever can be found in the Young patent for selectively raising and lowering the entire sled device based on the detection of an animal in the vicinity of the sled. A device according to the Young patent therefore has the same problems as the prior art device disclosed in the present application over which the present invention is defined.

Similarly, the Haslett patent discloses a trawl net provided with echoing means (transmitting transducer 14) for locating fish swimming above a seabed. The net is brought into a position spaced well apart from the seabed, such as not to disturb the seabed and preventing any risk of the net being caught by elements on the seabed. The echoing device is used as a detecting means for detecting fish, such that it will become clear when fish will be caught in the net. Again, no indication whatsoever is given in the Haslett patent for lowering or raising the net depending on the echo signals. On the contrary, it is clearly indicated in the description (e.g., column 3 lines 30-49) that the net has to be in a specific position whereby the towing lines 12 are at a specific angle in order to maintain the echo head (transducer) in a specific position for the system to operate. Changing this position would render the system according to Haslett useless.

As set forth in the background section of the present specification, preventing disturbance of the seabed has been a problem for many years. Neither the Young patent nor the Haslett patent has recognized this problem. Quite the contrary, the device disclosed in the Young patent operates in the direct opposite fashion by disturbing the entire seabed and the device disclosed in the Haslett patent has no problems in that respect since the net is always kept well above the seabed. Therefore, a person skilled in the art reading Young would not recognize the problem solved by the present invention, or the solution presented. Moreover, even if a person skilled in the art would consider using an echo system according to Haslett in a device according to Young, this would only lead to the added value for Young that the animals living on the seabed might be detectable, not the animals in the seabed since according to Haslett the echo signals will be reflected by the sea bottom. More importantly, this combination would still not provide a person skilled in the art with any indication of moving the tines in and out of the seabed depending on a detection signal of the device.

Accordingly, for all of the foregoing reasons, it is respectfully submitted that independent Claims 1, 9, 17 and 20, and the claims that depend therefrom patentably distinguish over the prior art.

Amended Dependent Claim 2 and New Claim 23

Applicant has further amended dependent Claim 2 to define a plurality of tines, wherein fluid is selectively forced into the sea bottom from an individual tine based on the detecting means detecting the presence of an animal in front of the individual tine, and wherein each tine of the plurality of tines is independently activatable. New Claim 23, which depends from independent Claim 17, includes the same limitations. It is respectfully submitted that none of the prior art references, taken alone or combined, discloses tines that are independently activatable, as defined in Claims 2 and 23.

Instead, the tines of the Young patent and the Cain patent remain fixed relative to each other and can only be moved or activated together as a unit. (The Haslett patent does

not disclose the use of tines in any manner.) More specifically, fluid flows from all of the supply pipes of the Young patent simultaneously.

There is absolutely no disclosure in the Young patent of selectively forcing fluid through an individual pipe, independent of the other pipes, in response to an animal being detected in front of the respective individual pipe, as defined in Claims 2 and 23. Accordingly, it is submitted that amended Claim 2 and new Claim 23 patentably distinguish over the prior art.

Amended Dependent Claims 10, 18, 19 and 21, and New Claim 22

Applicant has further amended dependent Claims 10, 18, 19 and 21 to define a tine which is extendable below a plane defined by an underside of a collecting device into the sea bottom in response to a signal from an animal detector and which is further retractable above a plane defined by the underside in the absence of a signal from the detector. New Claim 22 includes a similar limitation. It is respectfully submitted that none of the prior art references, taken alone or combined, discloses tines that are extendable and retractable with respect to the underside of a collection device, based on the presence or absence of animals in front of the collection device.

Instead, the tines of the Young patent and the Cain patent are all fixed relative to the support frame on which they are provided. As such, the tines can not be extended or retracted with respect to the support frame. The tines of the Young patent are inserted into the sea floor when the support frame comes to rest on the sea floor, and can only be removed from the sea floor by lifting the entire support frame off the sea floor.

In direct contrast, the present claimed invention allows for selective insertion and removal of the tines while the support frame remains on the sea bottom. There is absolutely no teaching or suggestion of this feature in any of the cited references. Accordingly, it is submitted that amended Claims 10, 18, 19 and 21 and new Claim 22 patentably distinguish over the prior art.

Amended Dependent Claim 12 and New Claim 24

Claim 12 depends from Claim 11, which in turn depends from amended Claim 10. Claim 12 has been amended to further define a plurality of tines that are independently extendable and retractable relative to the plane defined by the underside of the collecting device. New Claim 24, which depends from amended Claim 21, includes a similar limitation. It is respectfully submitted that none of the prior art references, taken alone or combined, discloses a plurality of tines that are individually, independently extendable and retractable with respect to the underside of a collection device, based on the presence or absence of animals in front of the collection device.

As described above, the tines of the Young patent and the Cain patent remain fixed relative to each other and can only be moved or activated together as a unit. Moreover, these tines are all fixed relative to the support frame on which they are provided. As such, the tines can not be extended or retracted with respect to the support frame, or with respect to each other.

The invention defined in Claims 12 and 24 allows for selective individual insertion and removal of the tines independent of each other while the support frame remains on the sea bottom. There is absolutely no teaching or suggestion of this feature in any of the cited references. Accordingly, it is submitted that amended Claim 12 and new Claim 24 patentably distinguish over the prior art.

In view of the foregoing amendment and remarks, favorable consideration and allowance of the application with Claims 1-3, 5-6, 9-15 and 17-24 are respectfully solicited. If the Examiner believes that a telephone interview would assist in moving the application

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toward allowance, he is respectfully invited to contact the Applicant's attorney at the telephone number listed below.

Respectfully submitted,



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